

That which is claimed is:

1. An organic light-emitting diode comprising:  
a substrate having a first opposing surface and a second opposing surface;  
a first electrode layer overlying the first opposing surface;  
a light-emitting element overlying the first electrode layer, the light-emitting element comprising  
a hole-transport layer and  
an emissive/electron-transport layer, wherein the hole-transport layer and the emissive/electron-transport layer lie directly on one another, and the hole-transport layer comprises a cured polysiloxane prepared by applying an organosilicon composition to form a film and exposing the film to moisture, wherein the organosilicon composition comprises (A) at least one silane having the formula  $R^1SiX_3$  and (B) an organic solvent, wherein each  $R^1$  is independently selected from  $-Y-Cz$ ,  $-(CH_2)_m-C_nF_{2n+1}$ , and  $-(CH_2)_m-C_6F_5$ , wherein  $Cz$  is N-carbazolyl,  $Y$  is a divalent organic group,  $m$  is an integer from 2 to 10,  $n$  is an integer from 1 to 3, and  $X$  is a hydrolysable group; and  
a second electrode layer overlying the light-emitting element.
2. The organic light-emitting diode according to claim 1, wherein  $X$  in component (A) is  $-Cl$  or  $-Br$ .
3. The organic light-emitting diode according to claim 1, wherein  $R^1$  in component (A) is  $-Y-Cz$ , wherein  $Cz$  is N-carbazolyl and  $Y$  is a divalent organic group.
4. The organic light-emitting diode according to claim 3, wherein  $Y$  is  $C_1$  to  $C_{10}$  alkylene.
5. The organic light-emitting diode according to claim 1, wherein  $R^1$  in component (A) is  $-(CH_2)_m-C_nF_{2n+1}$  or  $-(CH_2)_m-C_6F_5$ , wherein  $m$  is an integer from 2 to 10 and  $n$  is an integer from 1 to 3.

6. The organic light-emitting diode according to claim 1, wherein the concentration of component (A) is from 0.5 to 10% (w/w), based on the total weight of the organosilicon composition.

7. The organic light-emitting diode according to claims 1, 3, or 5, wherein the organosilicon composition further comprises at least one cross-linking agent having the formula  $R^2_pSiX_{4-p}$ , wherein  $R^2$  is C<sub>1</sub> to C<sub>8</sub> hydrocarbyl or halogenated hydrocarbyl, X is a hydrolysable group, and p is 0 or 1.

8. The organic light-emitting diode according to claim 1, wherein the organosilicon composition further comprises at least one hydrolysis catalyst.

9. The organic light-emitting diode according to claim 1, wherein the emissive/electron transport layer comprises a fluorescent dye.

10. The organic light-emitting diode according to claim 1, further comprising at least one of a hole-injection layer and an electron injection layer.